

# APPENDIX A

## LIST OF PROPOSED WELL LOCATIONS

Well Name	Well Number	New Well Number							(40FT Rat Hole)	
			POD	SECTION	SPOT	TWP	RNG	ELEV_GR	CASING DEPTH	TOTAL DEPTH
RANCHOLME FED	11C/W-0191	11D2/D3/M/C/W-0191	DCN AMEND	1	NWNW	9S	41E	4022	1268	1268
RANCHOLME FED	21C-0191	21D2/D3/M/C/W-0191	DCN POD	1	NENW	9S	41E	4095	1339	1339
PORTER FED	31C-0191	31D2/D3/M/C/W-0191	DCN POD	1	SWNE	9S	41E	4074	1326	1326
RANCHOLME FED	21C-0291	21D2/D3/M/C/W-0291	DCN POD	2	NENW	9S	41E	3997	1232	1232
FEDERAL	24C-0291	24D2/D3/M/C/W-0291	DCN POD	2	SESW	9S	41E	3817	1054	1054
MT ROYALTY FED	22C-0491	22D2/D3/M/C/W-0491	DCN POD	4	SENW	9S	41E	3698	859	859
DECKER FED	12C/W-0591	12D3/M/C/W-0591	DCN AMEND	5	SWNW	9S	41E	3593	771	771
DECKER FED	21C-0591	21D3/M/C/W-0591	DCN POD	5	NENW	9S	41E	3632	813	813
DECKER FED	23C/W-0591	23D3/M/C/W-0591	DCN AMEND	5	NESW	9S	41E	3616	802	802
DECKER FED	31C/W-0591	31D3/M/C/W-0591	DCN AMEND	5	NWNE	9S	41E	3655	836	836
DECKER FED	33C/W-0591	33D3/M/C/W-0591	DCN AMEND	5	NWSE	9S	41E	3683	865	865
DECKER FED	42C-0591	42D3/M/C/W-0591	DCN POD	5	SENE	9S	41E	3654	828	828
DECKER FED	11C-0691	11D3/M/C/W-0691	DCN POD	6	NWNW	9S	41E	3621	770	770
DECKER FED	22C/W-0691	22D3/M/C/W-0691	DCN AMEND	6	SENW	9S	41E	3544	697	697
DECKER FED	31C-0691	31D3/M/C/W-0691	DCN POD	6	NWNE	9S	41E	3650	810	810
DECKER FED	42C/W-0691	42D3/M/C/W-0691	DCN AMEND	6	SENE	9S	41E	3596	760	760
MT ROYALTY FED	43C/W-1091	43D1/D2/D3/M/C-1091	DCN AMEND	10	NESE	9S	41E	3771	872	872
FEDERAL	11C-1191	11D1/D2/D3/M/C-1191	DCN POD	11	NWNW	9S	41E	3827	860	860
RANCHOLME FED	22C/W-1191	22D1/D2/D3/M/C-1191	DCN AMEND	11	SENW	9S	41E	3882	953	953
RANCHOLME FED	33C/W-1191	33D1/D2/D3/M/C-1191	DCN AMEND	11	NWSE	9S	41E	3909	987	987
PORTER FED	41C-1191	41D2/D3/M/C-1191	DCN POD	11	NENE	9S	41E	3921	979	979
RANCHOLME FED	44C-1191	44D1/D2/D3/M/C-1191	DCN POD	11	SESE	9S	41E	3832	916	916
PORTER FED	22C/W-1291	22D1/D2/D3/M/C-1291	DCN AMEND	12	SENW	9S	41E	3802	860	860
PORTER FED	31C-1291	31D1/D2/D3/M/C-1291	DCN POD	12	NWNE	9S	41E	3928	919	919
RANCHOLME FED	41D2-1491	41D1/D2/D3/M/C-1491	DCN AMEND	14	NENE	9S	41E	3770	863	863
MT ROYALTY FED	22C-1591	22D1/D2/D3/M/C-1591	DCN POD	15	SENW	9S	41E	3588	708	708
MT ROYALTY FED	23C-1591	23D1/D2/D3/M/C-1591	DCN POD	15	NESW	9S	41E	3651	782	782
MT ROYALTY FED	24C/W-1591	24D1/D2/D3/M/C-1591	DCN AMEND	15	SESW	9S	41E	3745	865	865
FEDERAL	33C/W-1591	33D1/D2/D3/M/C-1591	DCN AMEND	15	NWSE	9S	41E	3731	851	851
MT ROYALTY FED	42C-1591	42D1/D2/D3/M/C-1591	DCN POD	15	SENE	9S	41E	3593	691	691
MT ROYALTY FED	44C-1591	44D1/D2/D3/M/C-1591	DCN POD	15	SESE	9S	41E	3775	901	901

Well Name	Well Number	New Well Number							(40FT Rat Hole)	
			POD	SECTION	SPOT	TWP	RNG	ELEV_GR	CASING DEPTH	TOTAL DEPTH
RANCHOLME FED	22C-2291	22SM/D1/D2/D3/M/C-2291	DCN POD	22	SENW	9S	41E	3734	871	871
RANCHOLME FED	31C/W-2291	31SM/D1/D2/D3/M/C-2291	DCN AMEND	22	NWNE	9S	41E	3818	948	948
RANCHOLME FED	42C-2291	42SM/D1/D2/D3/M/C-2291	DCN POD	22	SENE	9S	41E	3866	1005	1005

**APPENDIX B**  
**SPECIAL STATUS SPECIES AFFECTS DETERMINATIONS**  
**SUMMARY TABLES**

**Federally Listed Threatened and Endangered Species and Species Proposed for Listing**

Species	Status	In Range (yes/no)	Habitat Present (yes/no)	Affects Determination (brief rationale)
Least tern	E	yes	no	
Piping Plover	T	no		
Whooping Crane	E	no		
Black-footed ferret	E	yes	no	See discussion, section 3.12.1, 4.2.12.1
Canada Lynx	T	no		
Gray wolf	E	no		
Grizzly Bear	T	no		
Bull Trout	T	no		
Pallid Sturgeon	E	no		
Spalding's Catchfly	P	no		
Ute Ladies'-tresses	T	no		
Water Howellia	T	no		
Western Prairie Fringed Orchid	T	no		

**BIRDS**

Species	In Range (yes/no) 1	Habitat present (yes/no) 2	Effects Determination (brief rationale) 3
Mountain Plover	yes	no	See discussion, section 3.12, 4.2.12
Bairds sparrow	yes	no	
Bald Eagle	yes	yes	See discussion, section 3.12, 4.2.12
Black-backed woodpecker	yes	no	
Black Tern	yes	no	

<b>BIRDS</b>			
Boreal owl	no		
Burrowing owl	yes	no	See discussion, section 3.12, 4.2.12
Canvasback duck	yes	no	
Columbian sharp-tailed grouse	no		
Common loon	no		
Dickcissel	yes	no	
Ferruginous hawk	yes	no	
Flammulated owl	no		
Great gray owl	no		
Hairy woodpecker	yes	yes	
Harlequin duck	no		
LeConte's sparrow	no		
Loggerhead shrike	yes	yes	
Long billed curlew	yes	no	
Northern goshawk	yes	no	Incidental observations on Ashland District of CNF
Peregrine falcon	yes	yes	
Pileated woodpecker	no		
Sage grouse	yes	yes	See discussion Sections 3.12, 4.2.12
Sage sparrow	no		
Swainson's hawk	yes	yes	
Three-toed woodpecker	yes	no	Documentation in counties west of project
Trumpeter swan	no		
White-faced ibis	no		

<b>MAMMALS</b>			
Species	In Range (yes/no) 1	Habitat present (yes/no) 2	Effects Determination (brief rationale) 3
Black-tailed prairie dog	yes	yes	See discussion, section 3.12, 4.2.12
Fisher	no		
Meadow jumping mouse	no		
Merriam's shrew	yes	yes	Very little known of this species
North American wolverine	no		
Northern Bog Lemming	no		
Preble's Shrew	yes	yes	Very little known of this species
Pygmy rabbit	no		
Spotted bat	yes	yes	Very little known of this species
Spotted skunk (western)	no		
Swift fox	yes	no	
Townsend's big-eared bat	yes	yes	
White-tailed prairie dog	no		
Woodland caribou	no		

<b>REPTILES and AMPHIBIANS</b>			
Species	In Range (yes/no) 1	Habitat present (yes/no) 2	Effects Determination (brief rationale) 3
Snapping turtle	yes	yes	
Spiny softshell turtle	yes	yes	
Canadian toad	no		
Coeur d'Alene salamander	no		
Spotted frog	no		
Tailed frog	no		

<b>REPTILES and AMPHIBIANS</b>			
Species	In Range (yes/no) 1	Habitat present (yes/no) 2	Effects Determination (brief rationale) 3
Wood frog	no		
Plains Spadefoot	no	yes	
Great Plains Toad	no	yes	

<b>FISH</b>			
Species	In Range (yes/no) 1	Habitat present (yes/no) 2	Effects Determination (brief rationale) 3
Arctic grayling	no		
Blue sucker	no		
Bull trout	no		
Northern redbelly X Finescale dace	no		
Paddlefish	no		
Pearl dace	no		
Sauger	yes	yes	See discussion Sections 3.12, 4.2.12 & 4.3.12
Shortnose gar	no		
Sicklefin chub	no		
Sturgeon chub	no		
Westslope cutthroat trout	no		
Yellowstone cutthroat trout	no		

- 1) If project is not within the range of the species no determination of habitat presence is needed.
- 2) If habitat is not present no effects determination is needed.
- 3) Detailed Effects Determination is provided in the narrative of Environmental Assessment

BLM (Montana and Dakotas) Designated Sensitive Species	
Plant Species	Known sites in project area
Agastache cusickii	no
Arabis fecunda	no
Astragalus ceramicus var. apus	no
Astragalus geyeri	no
Astragalus scaphoides	no
Astragalus terminalis	no
Camissonia andina	no
Camissonia parvula	no
Carex crawei	no
Carex parryana var. idahoa (C. idahoa)	no
Cryptantha scoparia	no
Elymus flavescens (Leymus flavescens)	no
Eriogonum salsuginosum (Stenogonum salsuginosum)	no
Lesquerella carinata var. languida	no
Lesquerella lesicii	no
Lesquerella pulchella	no
Lomatium attenuatum	no
Malacothryx torreyi	no
Nama densum	no
Oenothera pallida var. idahoensis (O. pallida ssp. pallida)	no
Penstemon lemhiensis	no
Penstemon whippleanus	no
Quercus macrocarpa	no
Shoshonea pulvinata	no
Sphaeromeria argenta	no
Taraxacum eriophorum	no
Thalictrum alpinum	no
Thelypodium paniculatum	no

## **APPENDIX C**

### **SOCIAL AND ECONOMIC ASSUMPTIONS**

The impact analysis is based on the assumptions used in the MT FEIS, 2003 at pages 4-8, 4-111, 4-112 and the ZurMehlen, 2001 and the Langhus, 2001 data for employment and income estimates. The Montana CBNG wells have an average life of 15 years and are expected to produce .3 BCF (MT FEIS Vol. II, MIN-16). Exploration wells do not produce income and ten percent are dry holes. A gas price of \$4.00 per thousand cubic feet is assumed for this analysis.

The employment and income created are related to the project phase. The number of jobs and the associated wages for each phase are estimated as follows (ZurMehlen, 2001): 7 jobs and payroll of \$365,000 per 160 wells for exploration and development plus \$6,600 per well for 42 contract well drillers and pipeline installers (Langhus, 2001); 9 jobs and payroll of \$345,000 per 160 wells for production; and 12 jobs and payroll of \$415,000 per 160 wells for abandonment. Typical drilling operations, whether exploration or production, would require 3 to 5 days with an additional 2 to 3 days for completion work. A maximum 7 to 8 people would be present at any one time during the construction phase.

All dollar amounts are reported in 2001 dollars with no adjustments for inflation for comparison with the MT FEIS analysis.

Royalty rates for all lease ownerships, Federal, State and private, are assumed at 12.5 percent of well head value. Montana receives 50 percent of the Federal royalties paid. Montana taxes all gas production at 9.3 percent of well head value, after the first year. Private royalties are taxed at 15.1 percent. On average 50 percent of the production taxes are returned to the local governments.

Impacts to livestock operations could result from construction of the well pad sites, groundwater drawdown and produced water. However, the 160 acre spacing of the well pads and the temporary nature of the activities associated with CBNG drilling and testing, should not result in a reduction of AUM's to individual operators and suitable produced water can be used for livestock. (See Livestock section) Also, the MT-DNRC requires CBNG operators to offer water mitigation agreements to owners of water wells or natural springs adversely impacted by CBNG development. (See Hydrology section)

Direct economic impacts include changes in personal income and employment; lease royalties; income and production taxes. Indirect impacts would include induced economic activity from local purchases for supplies, equipment and services.

Social impacts would include changes to social well being due to changes in personal income and employment and possible effects to private surface owners whose land is underlain by federal minerals.



**APPENDIX D**  
**POD LEGAL DESCRIPTIONS**

**DEER CREEK NORTH POD**  
**LEGAL DESCRIPTION**  
**WITH SURFACE AND MINERAL (OIL & GAS) OWNERSHIP AND ACRES**

Township	Range	Section	Subdivision	Acres of Federal Surface	Acres of Federal Minerals (O & G)	Acres of Private Surface	Acres of Private Minerals (O & G)	Total Acres
9 South	41 East	1	Lots 5-10, SW $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$	--	308.22	549.16	240.94	549.16
		2	Lots 5-8, S $\frac{1}{2}$ N $\frac{1}{2}$ , S $\frac{1}{2}$	222.11	243.16	339.97	318.92	562.08
		3	Lots 5-8, S $\frac{1}{2}$ N $\frac{1}{2}$ , S $\frac{1}{2}$	40.00	103.19	539.28	476.09	579.28
		4	Lots 5-8, S $\frac{1}{2}$ N $\frac{1}{2}$ , S $\frac{1}{2}$	29.61	288.84	566.75	307.52	596.36
		5	Lots 5-8, S $\frac{1}{2}$ N $\frac{1}{2}$ , S $\frac{1}{2}$	--	493.40	613.40	120.00	613.40
		6	Lots 6-12, S $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$	--	385.21	619.69	234.48	619.69
		7	Lots 5 & 6, E $\frac{1}{2}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$	--	112.96	472.96	360.00	472.96
		8	All	--	40.00	640.00	600.00	640.00
		9	All	--	--	640.00	640.00	640.00
		10	All	--	120.00	640.00	520.00	640.00
		11	All	40.00	560.00	600.00	80.00	640.00
		12	Lots 1 & 2, W $\frac{1}{2}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$	--	239.30	319.30	80.00	319.30
		14	N $\frac{1}{2}$	--	80.00	320.00	240.00	320.00
		15	All	40.00	520.00	600.00	120.00	640.00
		22	N $\frac{1}{2}$	--	320.00	320.00	--	320.00
			<b>TOTAL ACRES</b>	<b>371.72</b>	<b>3,814.28</b>	<b>7,780.51</b>	<b>4,337.95</b>	<b>8,152.23</b>

## **APPENDIX E**

### **Interim Procedures for Processing Coal Bed Natural Gas Applications for Permit to Drill (APDs)/Plans of Development (PODs) Prior to the Record of Decision for the Supplement to the Montana Statewide Oil and Gas Environmental Impact Statement (SEIS) and Amendment of the Powder River and Billings Resource Management Plans January 2008**

The Miles City Field Office will use the following procedures to process individual APDs and PODs for coal bed natural gas wells in accordance with the District Court Order dated April 5, 2005 until the Record of Decision is signed for the Supplemental EIS. These procedures will apply to the entire BLM planning area covered by the 2003 Statewide Final EIS/Amendment (Powder River and Billings RMP Areas). All Onshore Oil and Gas Order Number 1 processing times and applicant notification requirements will be followed. After completion of the NEPA analysis for individual APDs or PODs, MCFO will approve, approve with modifications or deny the APDs or POD. The NEPA analysis will be tiered to the 2003 Statewide Final EIS/Amendment and include review to insure proposed actions are processed consistent with the management objectives of the Preferred Alternative being considered in the SEIS.

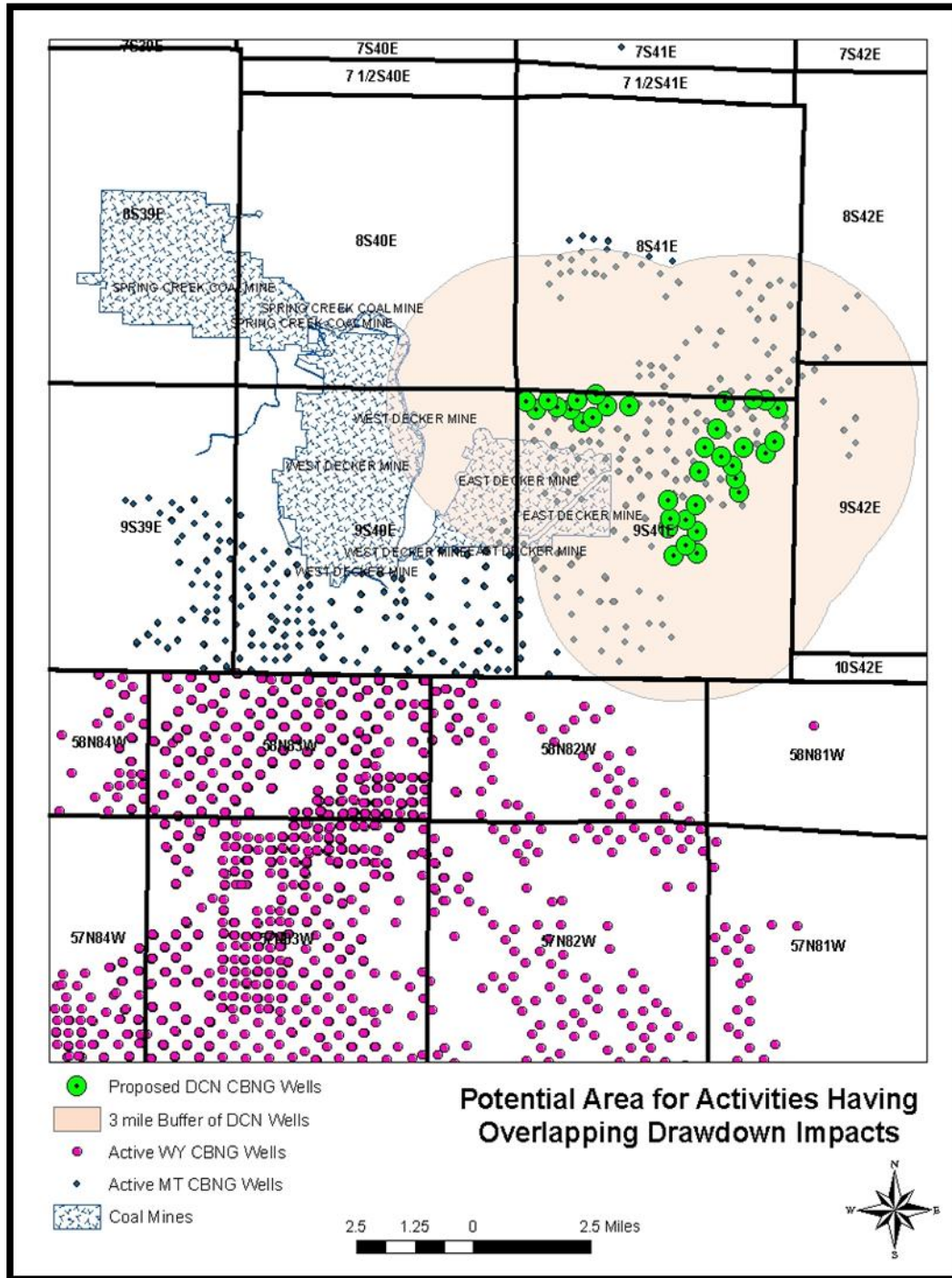
The District Court Order included instructions to BLM for approving CBNG APDs during preparation of the SEIS. The following is the exact content of the April 5, 2005 District Court Order, except for the footnote related to water mitigation agreements. In the original Court Order this footnote appeared as footnote number 2, because footnote number 1 appeared in an earlier portion of the Order that is not related to these procedures.

1. BLM is directed to prepare a SEIS that addresses a phased development alternative for CBM production in the Billings and Powder River Resource Areas of Montana.
2. While the SEIS is being prepared, BLM is enjoined from approving production-related CBM APDs outside of the following defined geographic area: Townships 7½, 8, 9, and 10 South; Ranges 39, 40 41, 42, 43 and 44 East.
3. Within the geographic area defined in paragraph 2, BLM shall limit the number of production-related APDs to a number that keeps the total number of federal, state, and private wells to maximum of 500 new wells per year beginning on the date of this order.
4. BLM will restrict Water Management Plans for federal wells to prohibit:
  - a. Surface discharge of “untreated” produced water, except for the one existing MPDES permit which allows for untreated discharge (MT-0030457, including any modifications/renewals);
  - b. Discharge of produced water into unlined impoundments (as defined by Onshore Order #7), except where already approved; and
  - c. Discharge of produced water into “on-drainage” impoundments.
5. BLM shall not approve an APD unless the operator has certified that water mitigation agreements are in place for all wells and springs located within one mile of federal wells. BLM shall require each agreement to include measures to remedy methane-related impacts. BLM shall require operators to conduct baseline and periodic monitoring of all water wells and springs covered by the agreement.
6. If a water well or spring is adversely affected by a CBM well, BLM shall require the operator to offer a water well mitigation agreement to owners of any water well or spring within one-half mile of the adversely affected well.

7. BLM shall require operators to retain an archaeologist holding a valid BLM Cultural Resources Permit. The archaeologist must be available to conduct monitoring during construction at BLM specified sites on federal leases. BLM shall require operators to provide an opportunity for a Northern Cheyenne Tribal cultural resources specialist to monitor construction at BLM specified sites on federal leases. Monitoring by a Tribal specialist shall only be conducted with the consent of the surface owner.
8. All exploration-only APDs shall be subject to the management requirements of paragraphs 4 through 7.
9. This injunction shall remain in place until 15 days after the BLM issues its Record of Decision adopting the SEIS.
10. The court shall retain jurisdiction over this action for the purpose of enforcing this injunction.

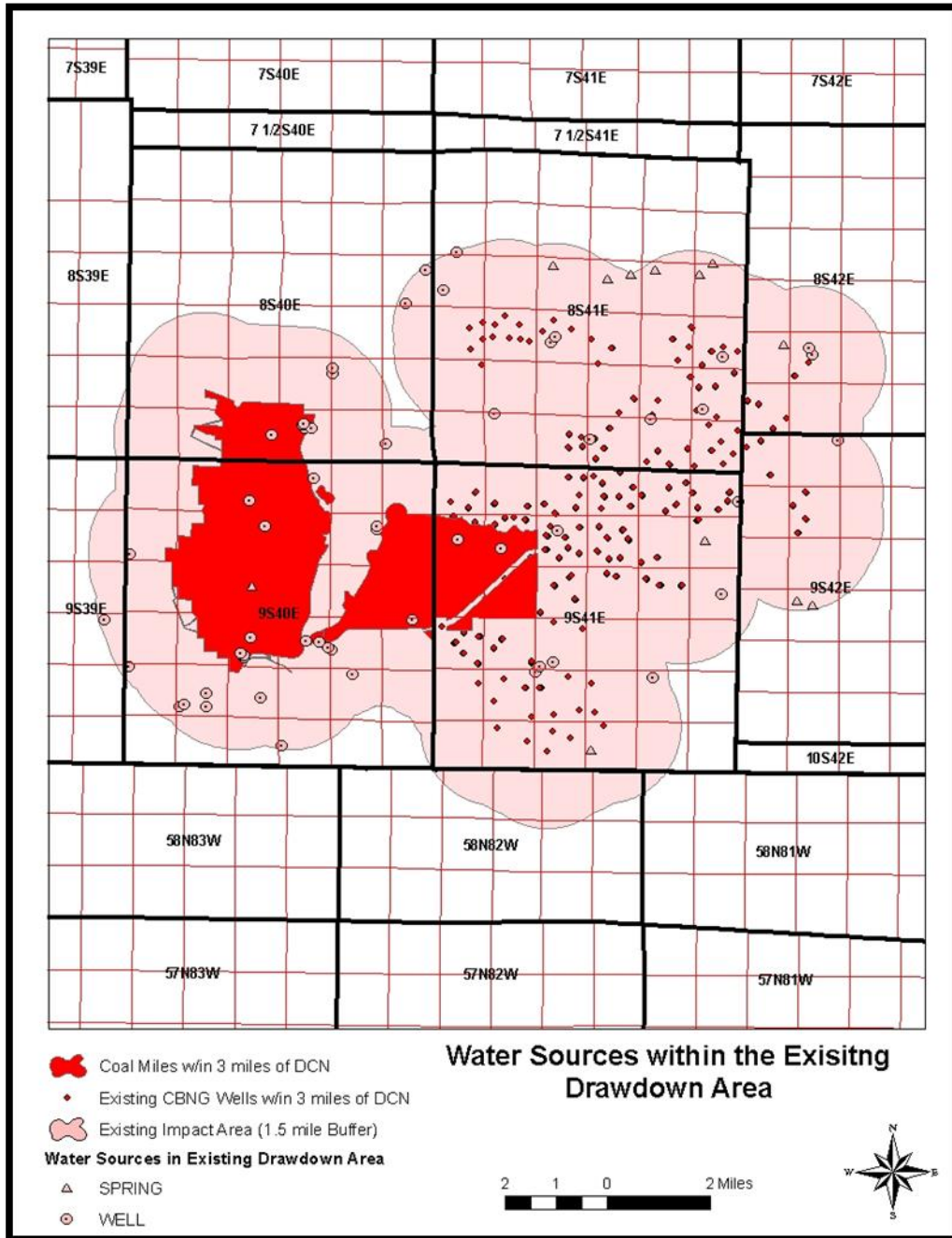
## APPENDIX F HYDROLOGY

Figure Hydro-1: Coal Mines and Active CBNG Wells within 3 Miles of the Proposed Deer Creek North POD



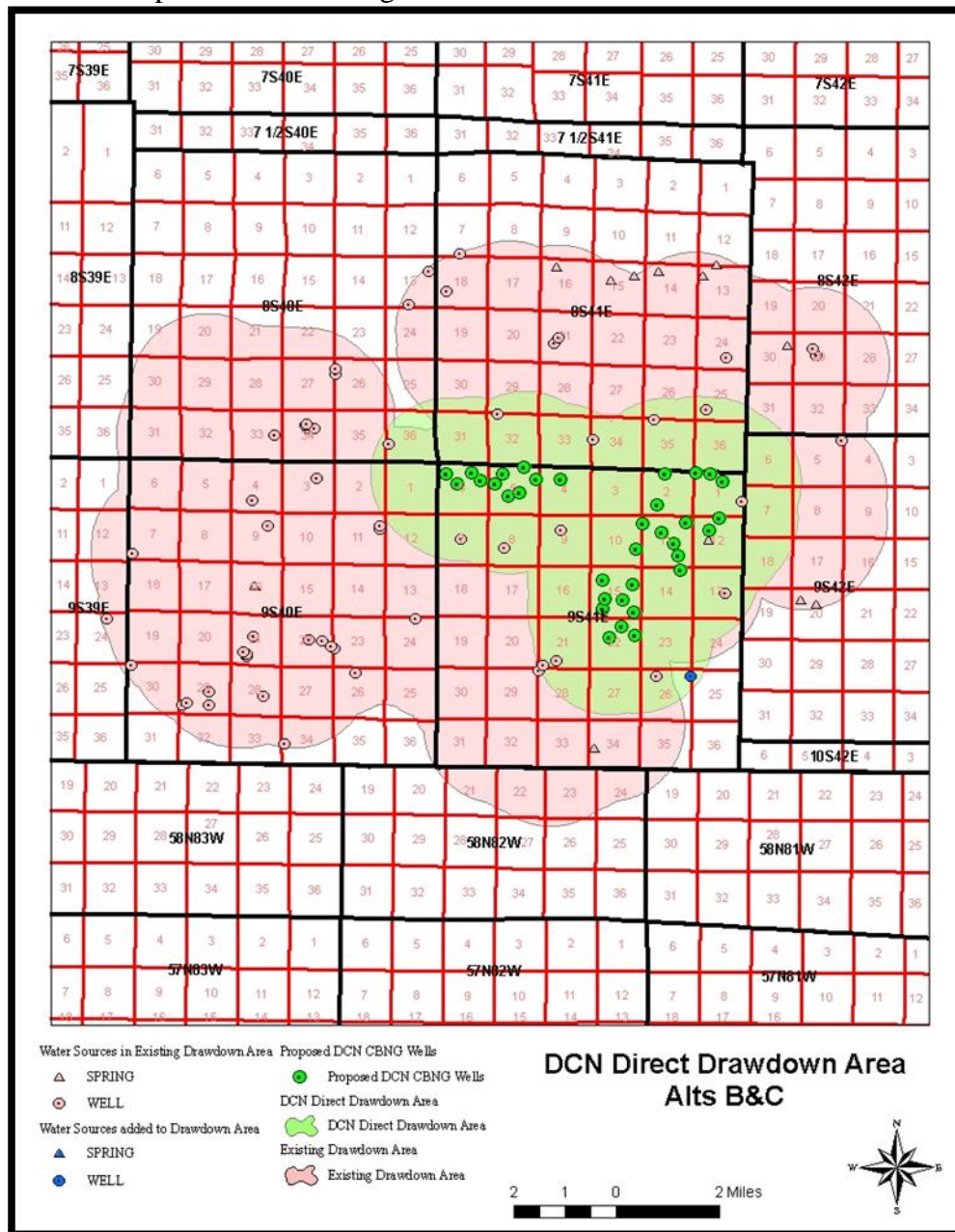
*This figure shows a 3 mile buffer around the proposed Deer Creek North CBNG wells. The Decker East and Decker West Coal Mines and some Montana CBNG wells are included in this buffer. These are the existing activities which have the potential to combine with the proposed wells to create cumulative impacts.*

Figure Hydro-2: Area Anticipated to be Drawn Down by >20' by Existing Activities with Associated Water Sources



This figure shows a 1.5 mile buffer around the existing activities which have the potential to combine with the proposed wells to create cumulative impacts (see Figure Hydro-1). This represents the area that is anticipated to experience 20 feet or more of drawdown from existing activities. Water sources from MBMG's GWIC database that are located within this area are also displayed. The water sources include 57 wells and 12 springs (see Table Hydro-1).

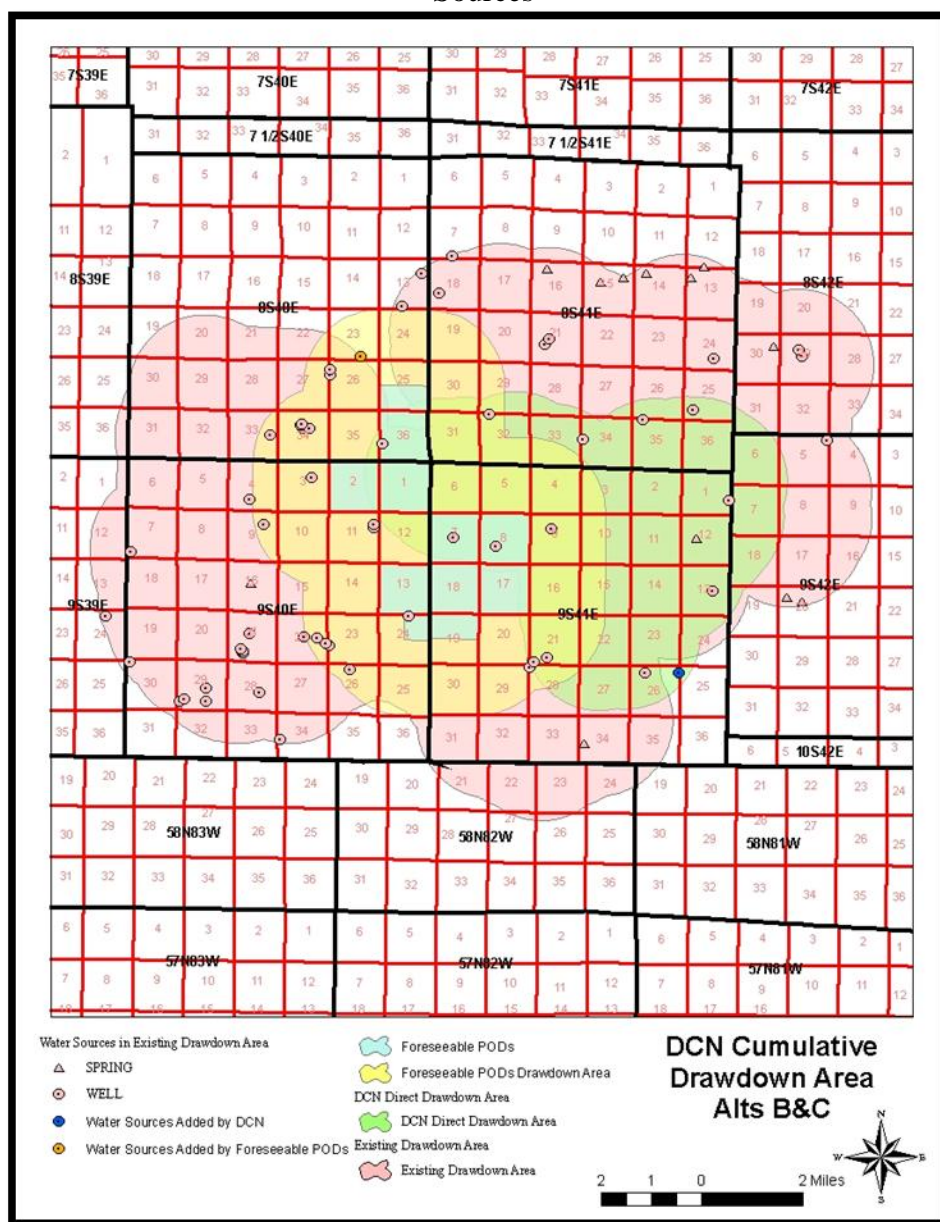
Figure Hydro-3: Projected Area Anticipated to be Drawn Down by >20' by the Proposed DCN Development and Existing Activities with Associated Water Sources



This figure shows a 1.5 mile buffer around the existing activities which have the potential to combine with the proposed wells to create cumulative impacts (see Figure Hydro-1) along with a 1.5 mile buffer applied to the proposed Deer Creek North CBNG Wells. This represents the area that is anticipated to experience 20 feet or more of drawdown from existing activities plus the proposed action. Water sources from MBMG's GWIC database that are located within this area are also displayed. One well is added to the drawdown area as a direct result of the proposed action (see Table Hydro-2).



Figure Hydro-4: Area Anticipated to be Drawn Down by >20' by Existing Activities, the proposed Deer Creek North Wells, and Other Foreseeable Activities with Associated Water Sources



This figure shows a 1.5 mile buffer around the existing activities which have the potential to combine with the proposed wells to create cumulative impacts (see Figure Hydro-1) along with a 1.5 mile buffer applied to the proposed Deer Creek North CBNG Wells and a 1.5 mile buffer applied to the proposed Decker Mine East and Coral Creek PODs. This represents the area that is anticipated to experience 20 feet or more of drawdown from existing activities plus the proposed action and other foreseeable activities. Water sources from MBMG's GWIC database that are located within this area are also displayed. One well is added to the drawdown area by the foreseeable actions in addition to the one well added by the proposed action (see Table Hydro-2).

**Table Hydro-1:**  
Water Sources within the Drawdown Area from Existing Activities

Site Name	Township	Range	Section	Type	Total Depth	Reported Source
<b>Springs</b>						
MIDDLE DUGOUT	08S	41E	15	SPRING	NA	Anderson (D1) Clinker
UPPER DUGOUT	08S	41E	15	SPRING	NA	Anderson (D1) Clinker
FLOREY SPRING	08S	41E	13	SPRING	NA	Anderson (D1) Clinker
UPPER ANDERSON CREEK SPRING	08S	41E	14	SPRING	NA	Anderson (D1) Clinker
LOWER DUGOUT	08S	41E	16	SPRING	NA	Upper Dietz (D2) Clinker
WEBSTER RANCH	08S	41E	12	SPRING	NA	Anderson (D1) Clinker
PIKES UPPER ANDERSON CREEK	08S	42E	30	SPRING	NA	Wasatch
THOMPSON J.W. *14 MI S OF BIG BEND SCHOOL	09S	40E	16	SPRING	NA	Mined Over
44 MAGNUM	09S	41E	34	SPRING	NA	Wasatch
PORTER H. * 11.5 M E DECKER MT *	09S	41E	12	SPRING	NA	Wasatch
HOME SPRING	09S	42E	20	SPRING	NA	Wasatch
LOWER HOME SPRING	09S	42E	20	SPRING	NA	Wasatch
<b>Wells</b>						
KINNISON TOM	08S	40E	13	WELL	200	Tongue River Sand & Coal
TRUSSLER BILL	08S	40E	13	WELL	200	Tongue River Coal
DECKER COMMUNITY CENTER	08S	40E	27	WELL	200	Tongue River Sand
KUKUCHKA WM * 6.5 M NE DECKER MT	08S	40E	33	WELL	NR	Tongue River Member
KUKUCHKA	08S	40E	34	WELL	40	Tongue River Member
KUCHKUKA	08S	40E	34	WELL	98	Tongue River Member
KUKUCHKA WILLIAM	08S	40E	34	WELL	98	Tongue River Sand
KUKUCHKA * 1.25 MI NE TONGUE RIVER MINE.	08S	40E	34	WELL	553	Tongue River Member
DEPT OF FISH-WILDLIFE AND PARKS	08S	40E	35	WELL	46	Tongue River Member
MUSGRAVE BILL	08S	41E	7	WELL	146	Tongue River "Hard Rock"
STATE WATER CONSERVATION BOARD	08S	41E	18	WELL	42	Tongue River Member
CARLAT ROBERT * 12 M NE DECKER MT *	08S	41E	21	WELL	99	Tongue River Member
PENSON CHAS. & GREG	08S	41E	21	WELL	125	Tongue River Member
PORTER H * 14 M NE DECKER MT *	08S	41E	25	WELL	420	Tongue River Member
PENSON CHARLES AND GREGG	08S	41E	32	WELL	199	Tongue River Member
HOLMES RANCH CO * 1.8 MI N HOLMES RANCH.	08S	41E	34	WELL	181	Tongue River Member
WILSON LEWIS C AND BEULAH A	08S	41E	35	WELL	12	Tongue River Member
WILSON LEWIS C AND BEULAH A	08S	41E	35	WELL	12	Tongue River Member
PARKER FRANCES * 2.3 MI SW BUTTE PINE SH	08S	42E	29	WELL	21	Tongue River Sand
PARKER FRANCIS	08S	42E	29	WELL	185	Tongue River Coal, Clay & Rock
POWERS EVERETT	09S	39E	24	WELL	235	Tongue River Coal
* KUKUCHKA * 7M N SQUIRREL CREEK SCHOOL *	09S	40E	3	WELL	NR	Tongue River Member
MINER JIM * 4.2 M SE DECKER MT	09S	40E	4	WELL	NR	Tongue River Member
POWERS EVERETT G.	09S	40E	7	WELL	274	Tongue River Coal
HERRINGTON D * 13 MI SE BIG BEND SCHOOL	09S	40E	9	WELL	150	Tongue River Member
PENSON CHAS. & GREG	09S	40E	11	WELL	35	Alluvium
PENSON CHARLES & GREGG	09S	40E	11	WELL	100	Tongue River Member
EIDER WILLIS * 1.5 M NE DECKER MT	09S	40E	21	WELL	110	Tongue River Member
ELDER WILLIAM * 1.5 MI NE DECKER MT	09S	40E	21	WELL	110	Tongue River Member
MUNSON	09S	40E	21	WELL	171	Tongue River Member
JOHNSTON * 1.3 M NE DECKER MT *	09S	40E	21	WELL	227	Tongue River Member
MONTANA CLUB BAR * 1.5 MI NE DECKER MT	09S	40E	21	WELL	227	Tongue River Coal
JOHNSTON MANSEL	09S	40E	21	WELL	280	Tongue River Sand & Coal
THOMAS JESS	09S	40E	21	WELL	462	Tongue River Sand
MUNSON MRS EMMETT	09S	40E	22	WELL	30	Tongue River Gravel
MUNSON MRS EMMETT	09S	40E	22	WELL	80	Tongue River Sand & Coal
MUNSON EMMET * 2.4 M NE DECKER MT *	09S	40E	22	WELL	169	Tongue River Member
MUNSON EMMET * 3.5 MI NE DECKER	09S	40E	22	WELL	170	Tongue River Member
MUNSON EMMETT	09S	40E	24	WELL	140	Tongue River Coal
MUNSON EMMETT	09S	40E	26	WELL	40	Tongue River Sand
MULLER JAMES	09S	40E	28	WELL	300	Tongue River Coal
MCCARTHY JAMES * 5 M SW SQUIRREL SCH *	09S	40E	29	WELL	151	Tongue River Member
BUMBACA DOMINIC F & ESTHER I	09S	40E	29	WELL	155	Tongue River Coal
SQUIRRELL CREEK SCHOOL	09S	40E	29	WELL	189	Tongue River Sand
MYER GARRETT	09S	40E	29	WELL	620	Tongue River Sand
POWERS EVERETT G.	09S	40E	30	WELL	238	Tongue River Coal
CONNOR ARLOW	09S	40E	34	WELL	37	Alluvium
PORTER H.A. * 12.3 MI NEW OF DECKER MT.	09S	41E	1	WELL	180	Tongue River Member
PORTER HARVEY	09S	41E	7	WELL	338	Tongue River Coal
* HOLMES RANCH * 7.4 M E DECKER MT *	09S	41E	8	WELL	NR	Tongue River Member
HOLMES RANCH * 8.5 M E DECKER MT *	09S	41E	9	WELL	29	Alluvium
BUREAU OF LAND MANAGEMENT * BENCHMARK	09S	41E	13	WELL	322	Tongue River Coal
JOHNSTON	09S	41E	21	WELL	200	Tongue River Member
JOHNSTON	09S	41E	21	WELL	280	Tongue River Member
ELDER WILLIS W.	09S	41E	26	WELL	252	Tongue River Member
RANCHOLME CATTLE CO.	09S	41E	28	WELL	200	Tongue River "Rock"
K-4 KENDRICK CATTLE CO. STOCK WELL	09S	42E	5	WELL	120	Tongue River Member



**Table Hydro-2**

Water Wells added to the Projected Drawdown Area from the Deer Creek North Federal Wells and Foreseeable Activities

Site Name	Township	Range	Section	Total Depth (ft)	Reported Source	Surface Elevation	Min Elevation	Smith Top Elevation	Dietz Top Elevation	Monarch Top Elevation	Likely CBNG Impacts?
* HOLMES RANCH * 13 M SE DECKER MT * <sup>1</sup>	9S	41E	26	40	Alluvium	3685	3645	NA	NA	NA	No - Alluvial Well
MONTAYLOR *SEWER SITE <sup>2</sup>	8S	40E	23	176	Tongue River Member	3465	3289	NP	NP	3389	Yes

NA = Not Applicable

NR = Not Reported

NP = Not Present at site

Coal is intersected by the well bore

1: Added to Drawdown area by the proposed action.

2: Added to Drawdown area by foreseeable actions.

## Fidelity E&P – Deer Creek North PODs

### Compliance with Onshore Order #7

The purpose of Onshore Order #7 (43 CFR 3160) is to “specify informational and procedural requirements for submitted [sic] of an application for the disposal of produced water, and the design, construction and maintenance requirements for pits as well as the minimum standards necessary to satisfy the requirements and procedures for seeking a variance from the minimum standards.” (I.B)

Under Onshore Order #7 “Lined pit means an excavated and/or bermed area that is required to be lined with natural or manmade material that will prevent seepage. Such pit shall also include a leak detection system.” while “Unlined pit means an excavated and/or bermed area that is not required to be lined, or any pit that is lined but does not contain a leak detection system.”

All of impoundments associated with the Deer Creek North PODs (existing treatment facility) are lined with natural material that will prevent seepage, and monitoring will be required per the MDEQ MPDES permits. As such, these are considered to be lined impoundments.

The existing impoundments, 12-3490 and 34-3490, are located on private surface. The impoundments are considered to be "off-lease" since they would receive some of their water from different leases. Onshore Order #7 states in III.B.2.ii that if an operator submits a permit for the facility from the State or any other regulatory authority, approval can be granted unless such approval will have adverse effects on the Federal/Indian lands, or public health and safety. Fidelity has obtained permits from MBOGC for the 2 impoundments on private surface. Permits from MDEQ for these pits are not required since these impoundments are not located on drainage, and do not have spillways (i.e. they are used solely to impound waste, and they do not have the potential to discharge to surface waters); however since these pits are part of the treatment work for MPDES permit MT-0030724, the MDEQ does require monitoring of these impoundments.

Onshore Order #7 states in III.G.1 that if an operator submits valid MPDES permits, approval to discharge produced water to state waters can be granted. Fidelity currently has one MPDES permit for untreated discharge to the Tongue River (MT-0030457) and one MPDES permit for treated discharge to the Tongue River (MT-0030724).

The treatment of produced water via ion exchange will create a residual low pH Na-Cl type brine. Fidelity is managing this brine by injection. The brine is being transported by Kissack Water and Oil Services, Inc. and is injected into Kissack's Kuehne injection well which is operated under UIC permit #01109, and Kissack's Hamm #1 injection well which is operated under UIC permit #01036. Both of these wells are permitted as Class I injection wells. Onshore Order #7 states in III.B.2.b.i that “Submittal of the Underground Injection Control permit will be accepted by the authorized officer and approval will be granted for the removal or the produced water unless the authorized officer states in writing that such approval will have adverse effects on the Federal/Indian lands or public health and safety”. Fidelity has suggested that in the future the brine may be concentrated on site in a lined impoundment, crystallized to a solid, and either closed in place or transported and disposed of at a permitted non-hazardous waste landfill.

In order to ensure compliance with Onshore Order #7 the following conditions of approval (COAs) will apply:

- The operator will comply with the groundwater monitoring plan requirements for lined impoundments established by the MDEQ in the MPDES permits.
- Water from federal wells will not be discharged to surface waters unless a valid MPDES permit is in place for that discharge.
- Residual brine resulting from the treatment of water from Federal wells will be managed by injection into permitted Class I injection wells unless a Sundry Notice is submitted to, and approved by, the BLM.

## APPENDIX G

### ALTERNATIVE C

### ADDITIONAL MITIGATING MEASURES

#### Alternative C Mitigating Measures

1. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
  - whether the materials appear eligible for the National Register of Historic Places;
  - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary);
  - a timeframe for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate; and,
  - consult with affected Tribes as appropriate

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Timing restriction for grouse – Surface use is prohibited from March 1 to June 15 in grouse nesting habitat within 2 miles of a lek. This lease stipulation does not apply to the operation and maintenance of production facilities. Those wells that timing would apply, unless BLM grants an exception, modification or waiver (as defined in the FEIS Wildlife Monitoring and Protection Plan), include:
  - Timing restriction would **apply for all wells except** 44-1191, 41-1491, 22-1191, 11-1191, 24-0291, and 43-1091.
3. Timing restriction for crucial mule deer winter range - Surface use is prohibited from December 1 to March 31 with crucial winter range for wildlife. This lease stipulation does not apply to the operation and maintenance of production facilities. Those wells that timing would apply, unless BLM grants an exception, modification or waiver (as defined in the FEIS Wildlife Monitoring and Protection Plan), include:
  - Timing restriction would **apply for all wells except** 11-0191, 31-0191, 31-1291, 21-0191, 11-0691, 31-0691, 22-0691, and 42-0691.
4. Timing restriction for raptor nests - Surface use is prohibited from March 1 to August 1 within 1/2 mile of raptor nest sites which have been active within the past 2 years. This lease stipulation does not apply to the operation and maintenance of production facilities. Those wells that timing would apply, unless BLM grants an exception, modification or waiver (as defined in the FEIS Wildlife Monitoring and Protection Plan), include:
  - 22-0691, 11-0691, 31-0691, 43-1091, 22-1191, 31-1291, 11-1191, 24-0291, 31-0191, 21-0191, 44-1591, 42-2291, 24-1591, 23-1591, and 22-1591.
5. Prior to stock water tank installation on BLM administered surface, a “Cooperative Agreement for Range Improvements” listing Fidelity, the grazing permittee and the BLM as a cooperator must be obtained from the BLM’s Miles City Field Office.
6. Location #22-0691: Erosion control is needed below the road on the ephemeral drainage.
7. Location #43-1091: Erosion control is needed on the road and pipeline routes.
8. Location #12-0591: Install an appropriately sized culvert, minimum 18”.
9. Location #31-0591: Install rock, low-water crossings in the ephemeral drainages, while also rock the head-cut below the access route.

10. Leafy spurge was identified on locations 41-1191, 11-1191, 24-1591 requiring treatment strategies and management. Treatment prior to construction and undercarriage washing of construction equipment is required.
11. Canada Thistle was identified on location 33-1591 requiring treatment strategies and management. Treatment prior to construction and undercarriage washing of construction equipment is required.
12. In order to ensure compliance with Onshore Order #7 the following mitigating measures would apply:
  - The operator will comply with the groundwater monitoring plan requirements for lined impoundments established by the MDEQ in the MPDES permits.
  - Water from federal wells will not be discharged to surface waters unless a valid MPDES permit is in place for that discharge.
  - Residual brine which results from the treatment of water from Federal wells will not be discharged into an on-site lined pit for solidification unless the appropriate state permits are in place and a Sundry Notice, including a copy of the applicable MBOGC permit(s), and all applicable informational requirements under Onshore Order #7, are submitted to, and approved by, the BLM

### **General**

1. A pre-construction field meeting must be conducted prior to beginning any construction activities approved under this POD. The operator must contact the BLM Authorized Officer, (406-233-3645) at least 4 days prior to beginning operations so that the meeting can be scheduled. The operator is responsible for having all contractors present (dirt contractors, drilling contractor, pipeline contractor, project oversight personnel, etc.) including the overall field operations superintendent and for providing all contractors copies of the approved POD, project map and BLM Conditions of Approval pertinent to the work that each would be doing.
2. The operator must submit a Sundry Notice (Form 3160-5) to BLM for approval prior to construction of any new surface disturbing activities related to federal leases that are not specifically addressed in the approved APD or POD Surface Use Plan.
3. Prior to the use of pesticides on public land, the applicant must obtain from the BLM authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers and any other information deemed necessary by the authorized officer to such use. Disturbed areas must be monitored annually for the presence of noxious weeds from June through August. Monitoring must begin prior to disturbance.
4. Additional requirements may be imposed if changes in operational and/or environmental conditions dictate.
5. Production facilities shall be painted "Covert Green" 18-0617 TPX, an earthtone color from the Munsell Soil Color Chart, within 6 months after installation.

### **Drilling**

1. The reserve pit must be lined with an impermeable liner. An impermeable liner is any liner having permeability less than 10-7 cm/sec. The liner must be installed so that it will not leak and must be chemically compatible with all substances that may be put in the pit. Liners made of any man-made synthetic material must be of sufficient strength and thickness to withstand normal installation and pit use. In gravelly or rocky soils, a suitable bedding material such as sand must be used prior to installing the liner.
2. All wait on cement times must be sufficient for the cement to reach 500 psi compressive strength as required by Onshore Oil & Gas Order No. 2.III.B.
3. A variance is granted to Onshore Order # 2, III, Section 2a, minimum standards for well control equipment. This variance allows the use of a Washington Diverter or similar diverter and blooie line as requested.
4. A minimum of three centralizers must be installed on the production casing and spaced to afford maximum protection of the shallow coals and aquifers.
5. Any evidence of non-exempt wastes being put into the reserve pit may result in the BLM Authorized Officer requiring specific testing and closure requirements.

6. If these wells are drilled during the fire season (June-October), the operator must take all necessary precautions to ensure that fire hazard is minimized, including but not limited to mowing vegetation on the access routes and well sites and keeping firefighting equipment readily available when drilling.
7. The reserve pit must be constructed so that at least half of its total volume is below natural ground level.
8. Any materials classified as nonexempt hazardous wastes must be disposed of in an EPA approved facility.

#### **Access**

1. Access roads, including drainage control, must be improved and maintained as necessary or as directed by the BLM Authorized Officer to prevent soil erosion and to provide for safe and environmentally-sound access.
2. Water or other non-saline dust suppressants with at least 50 percent control efficiency must be applied during well site, battery site and road construction. Dust inhibitors (surfacing materials, non-saline dust suppressants and water) must be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on public surface will require prior approval from the BLM Authorized Officer.
3. Vehicle travel on unimproved two-track roads is prohibited during periods of inclement weather or spring thaw when the possibility exists for excessive surface resource damage such as creating ruts in excess of 4 inches or causing vehicles to travel outside two-track roadway.
4. Culverts must be placed on channel bottoms on firm, uniform beds, which have been shaped to accept them and aligned parallel to the channel to minimize erosion. Backfill material must be thoroughly compacted. All culverts must be appropriately sized in accordance with standards in BLM Manual 9113.

#### **Reclamation**

1. Reclamation plans must be submitted to BLM for approval via a Notice of Intent (NOI) Sundry Notice before abandoning individual federal POD facilities. Any deviation from the Surface Reclamation Plan included in the Deer Creek North Federal Project must be included at this time. Individual facilities include well locations, pipelines/utility corridors, access roads, and compressor sites.
2. Pit reclamation:
  - a. All pit(s) must be emptied of all fluids within 90 days after completion of drilling operations. The pit must be closed properly to assure protection of soil, water and vegetation.
  - b. The pit may not be cut or trenched.
  - c. Pit mud/sludge material may be buried onsite after the material has dried.
  - d. The plastic pit liner (if any) must be cut off below grade and properly disposed of at a state authorized landfill before beginning to recontour the site.
  - e. The pit material must be covered with a minimum of 3' of soil
3. Reclamation of disturbed areas on private surface must be in accordance with agreements between Fidelity and the landowners. The disturbed areas must be disked and seeded with a weed-seed free mix approved by the Natural Resource Conservation Service and the surface owner. At a minimum, 12 pounds per acre of seed would be planted, with the initial reseeding in the fall of 2008 or spring of 2009.
4. Areas of surface disturbance must be ripped or scarified to a depth of at least 12 inches before recontouring and redistributing topsoil. The rippers must not be set more than 24 inches apart.
5. Topsoil must be distributed evenly over the entire recontoured area. Prepare the seedbed by disking to a depth of 4-6 inches following the contour. Seed must be drilled on the contour to a depth of one-half inch, followed by cultipaction to compact the seedbed, preventing soil and seed losses
6. All disturbed areas on BLM surface must be seeded after October 1 (before ground freezes) or prior to May 15 (after ground thaws) at 6" drill row spacing at a depth of ¼" to ½" with the following mixture:

Combination must include at least four of the following species:

<i>Species of Seed</i>	<i>(Variety)</i>	<i>Common Name</i>	<i>Pounds/acre *(PLS)</i>
<u>Pascopyrum smithii</u>	(Rosanna)	Western wheatgrass	3.00
<u>Pseudoroegneria spicata</u>	(Goldar)	Bluebunch wheatgrass	2.00
<u>Stipa viridula</u>	(Lodom)	Green needlegrass	2.00
<u>Elymus trachycaulus</u>	(Pryor)	Slender wheatgrass	2.00
<u>Stipa comata</u>		Needleandthread	1.00
<u>Bouteloua curtipendula</u>		Sideoats Grama	2.00
<u>Schizachyrium scoparium</u>		Little bluestem	2.00

*\*Pure Live Seed (PLS) formula: % of purity of seed mixture times %  
germination of seed mixture = portion of seed mixture that is PLS*

Western wheatgrass must be included in the seed mix. Thickspike wheatgrass may be substituted only when Western wheatgrass is unavailable.

7. Slopes too steep for machinery may be seeded by hand broadcast with twice the amount of specified seed and raked.
8. Any mulch used for reclamation must be certified weed seed free and crimped into the soil.
9. Reclamation will be determined successful when the disturbed area and any areas of subsidence are stabilized, potential water erosion is effectively controlled, the area is free of debris and the vegetative stand is established with at least a 70% ground cover and is composed of at least 60% of the required species.
10. Waterbars must be constructed at least one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet of waterbar to ensure drainage and extended into established vegetation. All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. Subsequent waterbars should follow the following general spacing guidelines:

Slope (percent)	Spacing Interval (feet)
< 2	200
2 – 4	100
4 – 5	75
> 5	50

11. BLM will not release the bond until all disturbed areas associated with the APD/POD have been successfully revegetated (evaluation will be made after the second complete growing season) and has met all other reclamation goals of the surface owner and surface management agency.
12. For bond release approval, a Final Abandonment Notice (with a surface owner release letter on split-estate) must be submitted prior to a final abandonment evaluation by BLM.
13. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.

## **OTHER APPLICABLE REQUIREMENTS**

This is not a complete list of requirements, but is an abstract of some major requirements.

### **1. General Requirements**

- a. The lessee or designated operator shall comply with applicable laws and regulations; with the lease terms, Onshore Oil and Gas Orders; NTL's; and with other orders and instructions of the authorized officer. Any deviation from the terms of the approved APD require prior approval from BLM (43 CFR 3162.1(a)).
- b. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease due to a lease or unit boundary change, the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental or other financial obligation determined by the authorized officer.

### **2. Drilling Operations (Onshore Order No. 2)**

- a. All applicable safety precautions outlined in Onshore Order No. 2 shall be observed.

### **3. Well Abandonment (43 CFR 3162.3-4, Onshore Order No. 1 - Sec. V)**

Approval for abandonment shall be obtained prior to beginning plugging operations. Initial approval for plugging operations may be verbal, but shall be followed-up in writing within 30 days. Subsequent and final abandonment notifications are required and shall be submitted on Sundry Notice (Form 3160-5), in triplicate.

### **4. Reports and Notifications (43 CFR 3162.4-1, 3162.4-3)**

- a. Within 30 days of completion of the well as a dry hole or producer, a copy of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions or data obtained and compiled during the drilling, workover, and/or completion operations shall be filed with a Completion Report (Form 3160-4), in duplicate.
- b. In accordance with 43 CFR 3162.4-3, this well shall be reported on the Oil and Gas Operations Report (OGOR, MMS-4054), starting with the month in which drilling operations commence, and continuing each month until the well is physically plugged and abandoned.
- c. Notify this office within 5 business days of production start-up if either of the following two conditions occur:
  - (1) The well is placed on production.
  - (2) The well resumes production after being off of production for more than 90 days.  
"Placed on production" means shipment or sales of hydrocarbons from temporary tanks, production into permanent facilities or measurement through permanent facilities.

Notification may be written or verbal with written follow-up within 15 days, and must include the following information:

1. Operator name, address, and telephone number.
2. Well name and number, county and state.
3. Well location, "1/4", Section, Township, Range, P.M."
4. Date well begins or resumes production.
5. The nature of the well's production; that is crude oil, or crude oil casing gas, or natural gas and entrained liquid hydrocarbons.
6. The Federal or Indian lease number.
7. As appropriate, the Unit Agreement name, number and Participating Area name.
8. As appropriate, the Communitization Agreement number.

### **5. Verbal Notifications**

Made to the BLM, MCFO 406-233-3640, or after business hours to the appropriate individual's home phone shown on the list attached.

- A. Notify this office verbally at least 48 hours prior to beginning construction.
- B. Notify this office verbally at least 12 hours prior to spudding the well. (To be followed up in writing within 5 days.)
- C. Notify this office verbally at least 12 hours prior to running any casing or conducting any BOP tests. (To be followed up in writing within 5 days.)
- D. Notify this office verbally at least 6 hours prior to commencing any DST test.
- E. Notify this office verbally at least 24 hours prior to plugging the well to receive verbal plugging orders. (Refer to Informational Notice Item No. 3 for additional abandonment instructions.)
- F. Notify this office verbally at least 24 hours prior to removal of fluids from the reserve pit.

6. Environmental Obligations and Disposition of Production (43 CFR 3162.5-1, 3162.7-1 and 40 CFR 302-4)

- a. With BLM approval, water produced from newly completed wells may be temporarily stored in reserve pits up to 90 days. During this initial period, application for the permanent disposal method shall be made to this office in accordance with Onshore Order No. 7. If underground injection is proposed, an EPA or State permit shall also be obtained. If surface discharge of produced water is proposed, an MPDES permit shall also be required.
- b. Spills, accidents, fires, injuries, blowout and other undesirable events shall be reported to this office within the timeframes in NTL-3A.
- c. You are required to take all necessary steps to prevent any death of a migratory bird in pits or open vessels associated with the drilling, testing, completion, or production of this well. The death of any migratory bird found in such a pit or open vessel is a violation of the Migratory Bird Treaty Act and is considered a criminal act. Any deaths of migratory birds attributable to pits or open vessels associated with drilling, testing, completing or production operations must be reported to this office and the United States Fish and Wildlife Service within 24 hours.

We may require that the pit be designed or the open vessel be covered to deter the entry of birds in any facility associated with drilling, testing, completion or production of this well. Fencing, screening and netting of pits may be required as a means to deter bird entry. These conditions would most likely be imposed to prevent the entry of migratory birds if oil is left in pits or open vessels after the cessation of drilling or completion of operations, if water disposal pits consistently receive oil, or if pits or open vessels are used repeatedly for emergency situations which result in the accumulation of oil.

Voluntary pit fencing, screening and netting, or sealing vessels, is encouraged to avoid potential instances that may result in the death of a migratory bird.

7. Well Identification (43 CFR 3162.6)

Each drilling, producing or abandoned well shall be identified with the operator's name, the lease serial number, the well number, and the surveyed description of the well (either footages or the quarter-quarter section, the section, township and range). The Indian lessor's name may also be required. All markings shall be legible, and in a conspicuous place.

8. A complete copy of the approved Application for Permit to Drill (APD), including conditions, stipulations, and the H2S contingency plan (if required) shall be available for reference at the well site during the construction and drilling phases. **A copy of the approved Surface Use Plan of Operations and Conditions of Approval (COAs) shall be provided to the surface owner(s) prior to initiating construction.**
9. This drilling permit is valid for either two years from the approval date or until lease expiration, whichever occurs first.

10. Public Availability of Information (43 CFR 3100.4)

All submitted information not marked "CONFIDENTIAL INFORMATION" will be available for public inspection upon request.

If you have any questions, please contact a member of our staff at 406-232-3640.

**BUSINESS HOURS:** 7:45 A.M. to 4:30 P.M. (Mountain Time) Monday - Friday



## APPENDIX H

### OIL & GAS LEASE STIPULATIONS

Certain resources require protection from impacts associated with oil and gas activities. The specific resource and the method of protection are contained in lease stipulations. Lease stipulations are usually no surface occupancy, controlled surface use or timing limitation. Lease stipulations become a part of the lease and modify the terms of the lease.

Circumstances under which stipulations may be waived, excepted or modified are described in the stipulation. Stipulations may be waived, excepted, or modified at the discretion of the Authorized Officer during the environmental review process conducted for proposed Applications for Permit to Drill (APDs) or other permits related to oil and gas exploration and development. Waivers, exceptions and modifications of stipulations must be granted in accordance with the guidelines identified in the Record of Decision for the Miles City Oil & Gas RMP/FEIS Amendment, 1994.

The lessee or operator may submit a written request to the Authorized Officer for a waiver, exception or modification. The Authorized Officer will respond in writing by either granting or denying the request after reviewing circumstances and data pertinent to the request, as well as consulting with other applicable agencies. The response will include any constraints associated with granting the request or reasons for denying the request.

Deer Creek North wildlife lease stipulations:

1. Timing restriction for grouse – Surface use is prohibited from March 1 to June 15 in grouse nesting habitat within 2 miles of a lek. This lease stipulation does not apply to the operation and maintenance of production facilities. Those wells that timing would apply, unless BLM grants an exception, modification or waiver (as defined in the Wildlife Monitoring and Protection Plan), include:
  - Timing stipulations would **apply for all wells except** 44-1191, 41-1491, 22-1191, 11-1191, 24-0291, and 43-1091.
2. Timing restriction for crucial mule deer winter range - Surface use is prohibited from December 1 to March 31 with crucial winter range for wildlife. This lease stipulation does not apply to the operation and maintenance of production facilities. Those wells that timing would apply, unless BLM grants an exception, modification or waiver (as defined in the Wildlife Monitoring and Protection Plan), include:
  - Timing stipulations would **apply for all wells except** 11-0191, 31-0191, 31-1291, 21-0191, 11-0691, 31-0691, 22-0691, and 42-0691.
3. Timing restriction for raptor nests - Surface use is prohibited from March 1 to August 1 within 1/2 mile of raptor nest sites which have been active within the past 2 years. This lease stipulation does not apply to the operation and maintenance of production facilities. Those wells that timing would apply, unless BLM grants an exception, modification or waiver (as defined in the Wildlife Monitoring and Protection Plan), include:
  - 22-0691, 11-0691, 31-0691, 43-1091, 22-1191, 31-1291, 11-1191, 24-0291, 31-0191, 21-0191, 44-1591, 42-2291, 24-1591, 23-1591, and 22-1591.

**APPENDIX I**  
**DEER CREEK NORTH FEDERAL PROJECT**  
**PUBLIC COMMENT AND RESPONSE**

**General Comments**

1. Summary is confusing, clarify whether the Amendment replaces or was in addition to the 2005 POD and include a final total number of wells for the POD.
  - ❖ Please see the revised Summary.
2. The FONSI incorrectly states that the project does not have regional importance. The Project and its impacts should be considered as part of the overall CBM development in southeastern Montana.
  - ❖ Please see the revised FONSI that shows the importance of the proposed project. The EA includes a cumulative impact analysis and regional impacts have been analyzed and disclosed in the programmatic FEIS.
3. The landowners consulted appear to be those that will use the water Fidelity supplies to them for stockwater. Why weren't those who own land, have water rights, and rely on the ground and surface waters for their livelihoods and health, safety and welfare, consulted.
  - ❖ Those landowners that would be directly impacted by the Deer Creek North Federal Project were consulted and participated on the project field visits. The BLM requested public comment on this project through scoping (February 9 and 15, 2005) and EA/FONSI review (August 13-27, 2008). All interested parties to this project had opportunities to provide comments to BLM. The EA analyzed and disclosed potential impacts to other resources and land uses outside of the project area.
4. The EA tiers to the invalid 2003 Statewide FEIS and incorporating by reference information and analysis from the FEIS throughout the document. Approval of the type of commercial CBM development violates FLPMA and BLMs obligation to conform its actions to the terms and conditions of the governing land use plan. In the interim period before the SEIS ROD, BLM must develop EA's for projects that avoid tiering and referencing the FEIS. BLM should select a No Action Alternative until a ROD is signed on the SEIS
  - ❖ The April 5, 2005 District Court Order states:
    1. BLM is directed to prepare a SEIS that addresses a phased development alternative for CBM production in the Billings and Powder River Resource Areas of Montana.
    2. While the SEIS is being prepared, BLM is enjoined from approving production-related CBM APDs outside of the following defined geographic area: Townships 7½, 8, 9, and 10 South; Ranges 39, 40 41, 42, 43 and 44 East.
    3. Within the geographic area defined in paragraph 2, BLM shall limit the number of production-related APDs to a number that keeps the total number of federal, state, and private wells to maximum of 500 new wells per year beginning on the date of this order.
  - 4. BLM will restrict Water Management Plans for federal wells to prohibit:
    - a. Surface discharge of "untreated" produced water, except for the one existing MPDES permit which allows for untreated discharge (MT-0030457, including any modifications/renewals);
    - b. Discharge of produced water into unlined impoundments (as defined by Onshore Order #7), except where already approved; and
    - c. Discharge of produced water into "on-drainage" impoundments.
  - 5. BLM shall not approve an APD unless the operator has certified that water mitigation agreements are in place for all wells and springs located within one mile of federal wells. BLM shall require each agreement to include measures to remedy methane-related impacts. BLM shall require operators to conduct baseline and periodic monitoring of all water wells and springs covered by the agreement.
  - 6. If a water well or spring is adversely affected by a CBM well, BLM shall require the operator to offer a water well mitigation agreement to owners of any water well or spring within one-half mile of the adversely affected well.

7. BLM shall require operators to retain an archaeologist holding a valid BLM Cultural Resources Permit. The archaeologist must be available to conduct monitoring during construction at BLM specified sites on federal leases. BLM shall require operators to provide an opportunity for a Northern Cheyenne Tribal cultural resources specialist to monitor construction at BLM specified sites on federal leases. Monitoring by a Tribal specialist shall only be conducted with the consent of the surface owner.
8. All exploration-only APDs shall be subject to the management requirements of paragraphs 4 through 7.
9. This injunction shall remain in place until 15 days after the BLM issues its Record of Decision adopting the SEIS.
10. The court shall retain jurisdiction over this action for the purpose of enforcing this injunction.

The Deer Creek North Federal Project is consistent with the April 5, 2005 District Court Order; specifically it is located within the geographic area where development is permitted pursuant to the limited injunction. On October 29, 2007, the Ninth Circuit Court of Appeals affirmed the lower court's exercise of its discretion in issuing a partial injunction, finding that "it provides an equitable resolution consistent with the purposes of NEPA." Additionally, the Deer Creek North Federal Project EA provides site specific direct, indirect, and cumulative impacts to all effected resources. This is evident in the intensive analysis of surface and ground water, air quality, and wildlife.

5. Maps are difficult to view; include a third project area map, focusing on southeastern Montana and showing Deer Creek North in relation to the rest of the CX Field, Northern Cheyenne Reservation, other geographic landmarks, the 2 MPDES permits outfall locations, including which outfalls are associated with each permit and the two Northern Cheyenne parcels.
  - ❖ Please see map 1.3-3.
6. BLM should consider the evidence that shows CBM development is contributing to the decline in sage grouse populations, and recommend any and all mitigation measures that would prevent the future listing as an endangered species. The EA's mitigating measures for sage grouse do not appear to reflect all of the protections contemplated by the SEIS; the limited mitigation that is part of the EA will not be sufficient to protect sage grouse and their habitat in the project area.
  - ❖ First, there are no sage grouse leks located within the Deer Creek North project, with the nearest lek 2.38 miles from the project boundary. As noted in Chapter 3 & 4 of the Deer Creek North analysis, BLM has considered all recent studies, habitat mapping efforts and the Draft SEIS for sage grouse management guidance. BLM acknowledges CBNG development has contributed to the localized decline in sage grouse habitat and populations (4.12.3). However as disclosed in the EA, habitat alterations have already occurred from the County Road construction/use and CBNG development on fee lands, over the majority of sagebrush habitats available within this POD. Sage grouse preferred habitat has been reduced; therefore the potential that populations of sage grouse would utilize this area (3.12.3) has been greatly lessened. Additional federal development within this POD is expected to add only minimal impacts to the existing conditions. Actions identified within the SEIS and through research to conserve sage grouse populations and habitats will be proposed within any new development, located in sage grouse habitat, where federal actions are considered substantial enough to have an impact on habitat conservation for this species.
7. BLM's conclusion that approval of the project will not result in significant impacts to the environment is incorrect.
  - ❖ The EA analyzed and disclosed direct, indirect and cumulative impacts, and the analysis did not show any unresolved conflicts or significant impacts.
8. The EA is devoid of any socio-economic impacts or cumulative impact analysis on the Tribe; the BLM must consider fully before approving this project.
  - ❖ The EA is tiered to the 2003 FEIS and incorporates the analysis used in the December 2006 Draft SEIS. The Deer Creek North project is part of the off-Reservation actions forecast and analyzed in these documents. The social and economic impact analysis section in the EA is based on the development assumptions used in the FEIS and the Draft SEIS, including potential social and economic impacts to the Northern Cheyenne Tribe from off-Reservation development. The Deer Creek North project is approximately 20 miles south of the Northern Cheyenne Indian Reservation and approximately 18 miles east of the Crow Indian Reservation. Most full time and temporary workers are expected to commute from the Sheridan, Wyoming area. The potential socio-economic impacts to the

Tribes have been analyzed and disclosed in programmatic FEIS, the draft SEIS and the Deer Creek North project EA which did not show adverse impacts to the Tribes.

9. Pages 2-10 to 2-11 describing the number of CBM wells should include a breakdown of ownership and wells per operator.
  - ❖ Please see Map 1.3-2 for the existing State and Fee wells in the Deer Creek North Project area. The ownership of wells and the potential impacts from wells and infrastructure are analyzed and disclosed in Alternative A that includes only existing State and Fee wells, and Alternatives B and C that include all wells in the project area.
10. The pagination skips from 2-11 to 2-21
  - ❖ Please see the document revision.
11. The EA fails to address the cumulative impacts of the remaining 20,000 wells from the FEIS. The EA needs correction by including “some quantified or detailed information” regarding other reasonably foreseeable CBM development, including state and private wells.
  - ❖ The interdisciplinary team evaluated the proposed project in context of past, present and reasonably foreseeable actions. The environmental analysis did not show significant effects from the proposed project by itself or in addition to past, present and reasonably foreseeable future actions in the general area. The programmatic FEIS analyzed the cumulative impacts from the projected 20,000 CBNG wells. Tiering to the FEIS allows BLM to determine what site specific cumulative effects would require analysis for this project.
12. It is insufficient to merely state that such future CBM development in Montana and Wyoming is “too vague” when the FEIS concluded such development is reasonably foreseeable. There are a number of CBM projects not examined or even mentioned in the EA’s cumulative analysis, including the Fourmile East and West projects.
  - ❖ BLM does not agree with this comment. BLM analyzed all reasonably foreseeable CBNG projects that may contribute to the cumulative effects. Other projects, such as the Fourmile East and West POD’s, are far too early in the planning process to provide substantive detail to analyze and are considered to be speculative and vague. It is not reasonable to assess impacts of “unknown” future projects because they are not reasonably foreseeable.
13. The EA should mention there are two Northern Cheyenne parcels in close proximity, in Sections 23, 26 and 27.
  - ❖ Please see the revised Chapter 3, 3.3.3, Drainage of Indian Mineral resources.
14. Section 4.2.9 states that there will be an approximate 50% increase in the number of producing wells over three years in the CX Field. This suggests there is more information available and should be included in the cumulative impacts discussion.
  - ❖ Please see 4.2.9 for the revised number, 50% was incorrect.
15. Section 4.1.3 appears to contradict itself by stating that drainage would not result if the federal project was denied, but then saying that the no action alternative “would severely reduce the BLMs ability to resolve presently existing drainage situations.”
  - ❖ Please see the document corrections in Section 4.1.3.
16. Section 4.2.3 should include the total amount of gas to be produced from the 34 federal wells, as it does in Section 4.2.9.
  - ❖ This section of the EA has been modified to include this information.
17. The EA has virtually no information explaining monobore technology. The EA should examine impacts that are likely to be different from the assumptions typically applied to one well/seam analysis.
  - ❖ The EA’s water production rates are based upon other monobore wells in the area. The magnitude of drawdown resulting from this approach would be comparable to the drawdown seen in single coal completions. Additionally, please see the revised Summary and Chapter 2, 2.2.2: Drilling.

### **Produced Water Comments**

18. Fidelity's Deer Creek North Project water will not be put to beneficial use, in conformance with the July 2008 District Court Order, the Project and the FONSI are not in conformance with Montana law, which requires that all waters of the state be put to a recognized beneficial use.
  - ❖ The District Court Order stated that discharge of produced water to surface water does not constitute waste. The water management options analyzed in the EA are in conformance with current state laws and regulations. While these laws and regulations may change in the future, the analysis of such speculative changes is outside the scope of this document.
19. Discharges of CBNG water to the Tongue River under the MPDES permits will result in adverse impacts to downstream farmlands and aquatic life. As such, beneficial uses will be impacted.
  - ❖ The MDEQ has primacy for regulating surface water discharges under the Clean Water Act and the Montana Water Quality Act. MDEQ issued permits to Fidelity that authorize discharge of water produced with the production of CBNG. The permits include operational and reporting requirements. MDEQ conducted an environmental analysis in relation to all surface water quality criteria in place at the time of permit issuance, including non-degradation. These surface water quality criteria were developed specifically to protect beneficial uses, including irrigation and aquatic life. As such, the BLM considers these MPDES permits to be valid, and beneficial uses will be protected by compliance with the approved permits.
20. The MPDES permits and water right proposed to be used by Fidelity have been challenged in Court, and so they should not be relied upon.
  - ❖ These MPDES permits and this water right have been issued by the MDEQ and the DNRC. These State agencies have regulatory authority over surface water discharges and water rights, respectively. Although Court challenges are ongoing, the Courts have not ruled that these permits or this water right are invalid. As such, the BLM considers them to be valid.
21. BLM should independently ensure the compliance of the MPDES permits with the CWA.
  - ❖ These MPDES permits have been issued by the MDEQ which has regulatory primacy over surface water discharges under the Clean Water Act and the Montana Water Quality Act. MDEQ conducted an environmental analysis in relation to all surface water quality criteria in place at the time of permit issuance, including non-degradation. BLM considers these MPDES permits to be valid.
22. Water well mitigation agreements will not be effective for protecting senior water rights.
  - ❖ The State of Montana regulates water rights in the state. The Montana Legislature specifically developed legislation (MCA 82-11-175) to mitigate potential impacts to water rights as a result of CBNG development. Fidelity has certified that it is in compliance with this state law. BLM considers these measures and compliance with state law will protect senior water rights.
23. The MPDES permits did not need to be flow based, and they should require use of Best Available Technology and should have included a non-degradation analysis for EC and SAR.
  - ❖ These permits were developed and approved by MDEQ in conformance with the regulations that were in place at the time of permit issuance. BLM considers these MPDES permits to be valid.
24. Loss of water from the Tongue River Reservoir due to drawdown induced leakage reduces the amount of water available to irrigators.
  - ❖ As discussed in the EA, the leakage of water from the reservoir to coal seams as a result of drawdown would not be likely to result in a noticeable change in reservoir stage. The Draft SEIS (BLM, 2006) indicates that the rate of increased leakage due to CBNG related drawdown is approximately 1.5 gallons per minute (gpm). Since the MPDES permits are anticipated to discharge at up to 3,800 gpm, this slight loss through leakage would be overwhelmed by the increased inflow, and as such it would be unnoticeable.

25. The historical conditions used, taken from 1994 to 1995, do not reflect baseline water quality since coal mine discharges have been ongoing for decades.
- ❖ As discussed in the EA, the results from using the 1994 to 1995 data are adjusted for the difference between the historical record for each site up to September, 1999, and the shorter data set used in the analysis. Thus the calculated historical conditions are representative all historical monitoring data, including conditions affected by mine operations, up to September, 1999. The length of this record varies by station. This is not intended to reflect “natural” conditions, but rather to reflect “Pre-CBNG” conditions.
26. WDEQ’s watershed based General WPDES permits for the Tongue River should be included in the cumulative analysis.
- ❖ The WDEQ’s General WPDES permits for the Tongue River are in a Draft version. No CBNG producers have applied for coverage under these permits at this time. It is not known at this time if any CBNG producers will even want to be covered under the terms of these permits. Until particular CBNG discharges are proposed for coverage, analysis of the impacts from these permits is not ripe for analysis.
27. Inadequate information to support the conclusion, p. 3-15, Beneficial Use is not anticipated to result in noticeable impacts.
- ❖ Please see the revised Hydrology section of Chapter 4.
28. The BLM should incorporate an analysis of all possible beneficial uses that Fidelity could put the produced water to under its water marketing agreement water right.
- ❖ The EA describes impacts from those beneficial uses which have been proposed by Fidelity. If Fidelity proposes other uses of the produced water in the future, Fidelity will need to submit applications to the appropriate Federal or State agencies for approval. The agencies would review the applications and conduct the environmental analysis at that time. It is not reasonable to assess impacts of “unknown” future uses because they are not reasonably foreseeable.
29. The BLM should conduct comprehensive inventories and collect baseline data on aquifer withdrawals and recharge areas.
- ❖ The programmatic FEIS, which is incorporated by reference, provides information regarding the overall flow system and water rights within the Powder River Basin. The EA also incorporates by reference the most recent groundwater monitoring report for the Montana portion of the Powder River Basin (Wheaton et al., 2008). Additionally, CBNG operators are required to collect baseline and ongoing monitoring data in the area of proposed development in accordance with MCA 82-11-175 and MBOGC Order 151-2008. As such, additional information in the EA is not warranted.
30. Throughout the EA, it is unclear what the “water balance” is for Fidelity’s existing MPDES permits, perhaps add a “water balance forecast” table early in the EA.
- ❖ See Table 2.5-1
31. The status and parameters of Fidelity’s potential MPDES applications for treated discharge should be reviewed when considering produced water management for all reasonably foreseeable future CBM development.
- ❖ It is not reasonable to assess impacts of “unknown” future uses and applications because they are not reasonably foreseeable. As such, they are not ripe for analysis at this time.
32. It is unclear how much water is being discharged under each MPDES permit at this time, or how much would be discharged under each alternative in the future.
- ❖ Chapter 3 has been modified to better focus on existing conditions. The volume of water that would be discharged under each MPDES permit as a direct result of this proposal and as a cumulative result of CBNG development in this area is discussed in Chapter 4 under each alternative.
33. The EA should specify how much will be discharged under the untreated MPDES Permit (MT0030457) for each alternative.
- ❖ The anticipated discharges are specified in Chapter 4 and on Table 2.5-2.

34. The amount of untreated water that is blended with the treated water should be specified because the total volume of untreated discharge will need to eventually be evaluated under the SEIS's water quality screen (10% of 7Q10 flows).
- ❖ The SEIS clearly states that the water quality screen applies to untreated discharges, and that "Treated discharges are defined as those waters that have been treated to in-stream surface water standards at the end of pipe. Mixing of treated water with untreated waters would be allowed, and would not be counted towards the cumulative limit, so long as the end of pipe water quality met applicable in-stream standards." (Draft SEIS, page 2-19). Chapter 3 has been modified to indicate the percent of untreated water that can be blended with treated water under MPDES Permit MT0030724.
35. The BLM and DEQ water quality numbers are substantially different. The EA should consider and explain the difference in predicted SAR and EC in its own calculations and those of DEQ in the Statement of Basis.
- ❖ Chapter 4 of the EA states that "It should be noted that the MDEQ analysis looked at the impacts from both the Flow Based and Treatment permits discharging at the maximum allowable rates. As such, the MDEQ analysis is more conservative than the analysis in this EA. This is due to this EA considering the cumulative maximum volume of water that is forecast for the Fidelity's Tongue River CBNG development rather than maximizing the permits."
36. EA failed to acknowledge the Tribe's own non-degradation criteria. The EA needs to consider this conflict.
- ❖ The EA has been modified to include information regarding the Northern Cheyenne non-degradation criteria. Non-degradation criteria do not apply in-stream for assessing standards attainment, but rather serve as a trigger during the permitting process.
37. It is unclear why existing conditions need to be modeled. Monitoring data is available from the USGS and from the DMRs submitted by Fidelity under the terms of its MPDES permits. It would be more appropriate to use this monitoring data.
- ❖ As stated in Chapter 3 "EC and SAR levels are inversely related to flow (i.e. high EC and SAR values during low flows)." Since monitoring data are rarely collected at exactly the same flow modeling is needed to back out these flow effects.
38. Amend Alternative C by requiring Fidelity to use the full capacity of its treatment permit 30724 before discharging any produced water directly to the Tongue River under Permit 30457.
- ❖ The EA analyzed and disclosed direct, indirect and cumulative impacts, and the analysis did not show any unresolved conflicts or significant impacts resulting to other resources or beneficial uses from the discharge of produced water in compliance with the approved permits.
39. The EA's analysis of how the two permits capacities will be used under the alternatives should be consistent throughout the document. It is unclear whether the treatment permit is being utilized or whether 1,430 gpm of its 1,700 gpm capacity is managed from other projects.
- ❖ The amount of water discharge under permits for each alternative is discussed in Chapter 4 and displayed on Table 2.5-2.
40. The cumulative impacts in Table 4.2.4-2 are different than those in Table 4.2.4-1. A separate analysis considering the correct cumulative impact numbers should be substituted.
- ❖ BLM agrees, this was a typographical error that has been corrected.
41. Section 4.2.5 indicates the tribal minerals will not be drained because of an outcropping in two coal seams. This analysis should be given a greater explanation. The tribe believes a monitoring well should be installed to protect tribal trust resources.
- ❖ This section has been modified to provide a clearer explanation. The analysis in the EA shows no potential for drainage of Tribal trust assets. The BLM does not feel that a monitoring well is needed.
42. Section 4.2.4 should mention the total volume of produced water that is anticipated to be produced from the project both federal and state/private wells.

- ❖ This project only includes Federal wells; the state and fee are in place. The water production from all existing wells is included in the water balance analysis in the EA.

43. The EA should mention the total volume of water to be produced by the project.

- ❖ The Hydrology sections of Chapter 4 have been modified to include this information.

44. A comparison table, with percentage change in EC and SAR should be included in the EA.

- ❖ Please see Table 2.5-2

#### **Air Quality Comments**

45. Page 3-4 reference to the Reservation as “22 miles northeast” of the project should probably be “north”.

- ❖ Please see the revised Chapter 3, 3.1, Air Quality.

46. BLM is obligated under NEPA to analyze whether the CBM development alternatives are likely to violate the Class I air quality designation. The EA present no such increment consumption analysis and asserts that such analysis is not required. The EA must contain sufficient information to accurately determine whether CBM development is likely to violate the Class I increments, including any reasonably foreseeable development.

- ❖ As stated in the EA, these CBM projects are not subject to the New Source Review/Prevention of Significant Deterioration (NSR/PSD) program and Montana Department of Environmental Quality (MDEQ) PSD requirements according to Montana Administrative Rules. However, as stated in the EA the MDEQ does require air quality modeling, including a NO<sub>x</sub> PSD increment analysis for CNBG compressor stations and this modeling does consider cumulative emission sources. For example, the CO modeling completed for the Deer Creek Central Rancholme #14 Complex included the emissions from the Montana facilities within 10 km of the Complex (28 total with 4 RH-14 CO sources). The NO<sub>x</sub> modeling included these facilities in addition to all Wyoming facilities within 20-km of the proposed station for a total of 367 sources. The results of the NO<sub>x</sub> modeling, including the increment analysis completed for all of the production facilities necessary to process and transport CBNG resources from the Deer Creek North Project area are included in Chapter 4 of the EA. The Montana Administrative Rules for PSD modeling would not require MDEQ to include sources not currently permitted or that do not currently exist (e.g., Tongue River Railroad and Otter Creek Mines).

47. Emissions from compressors should be listed in a table alongside 1.5-1.

- ❖ The emission potential of the proposed project is summarized in Table 1.5-1. Emissions from permitted compressor stations are summarized in Chapter 4.

48. Contradiction between BLMs reliance on DEQ’s application of the 100 ton/12 month rule to exempt drill rigs and the entire portion of the project will be completed within 3 years. This contradiction should be clarified and a permit required based on NOx emissions.

- ❖ ARM 17.8.744 Montana Air Quality Permits – General Exclusions. This rule exempts drilling rigs that have the potential to emit less than 100 tons per year of any pollutant regulated under this chapter and that do not operate in any single location for more than 12 months.

The drilling rigs associated with the exploration portion of this project will drill one hole in any single location and then move to the next location. Therefore; no permit is required for the drilling rig because the exploration drilling in any single location will be minimal and short-lived (and would not exceed the 12 months in a single location criterion). The actual drill rig operations for all wells combined for the project area would total approximately 102 days, or approximately 3-4 months. A three year period for project completion is assumed to make sure all construction related aspects of the project, including interim reclamation activities, are included to develop the emission inventory. If a drill rig did operate in a single location for more than 12 months, it would require a Montana Air Quality Permit.



### **Cultural Resource Comments**

49. The citation should probably be 36 CFR 800.11. See also page 4-34 and App G.

- ❖ Please see the document revision.

50. Table 3.2.3 should include all inventoried sites including those mentioned in 3.2.4.1.

- ❖ Those sites not included in Table 3.2.3 were not found inside the project boundary.

51. A map of the 2006 “landscape level overview” should be included

- ❖ The 2006 Landscape Level Overview has not been finalized and the map would not provide any additional information germane to the analysis.

52. The 1997 National Programmatic Agreement is not applicable to the BLM’s obligations under the National Historic Preservation Act, as determined by the District Court in the Badger Hills litigation.

- ❖ The judge’s ruling is specific to the Badger Hills Case. The BLM’s National Programmatic Agreement for Cultural Resources and its associated implementing protocol with the Montana SHPO serve as BLM counterpart regulations to the 36 CFR 800 regulations. The National Programmatic Agreement does not remove BLM from the Section 106 Process.

53. There are several shortcomings to BLMs assertion that it has made good faith effort to consult with the Northern Cheyenne Tribe. The Amended POD and revised POD have not had consultation with the TPHO and SHPO, including the identification of TCPs.

- ❖ BLM did consult with the Northern Cheyenne Tribe on the “original” 2005 Deer Creek North POD. The consultation included a field trip and examination of the project area by BLM and Tribal representatives. A cultural resources block survey had been conducted for the 2005 Deer Creek North project area, and all findings from the survey were made known to the Tribe during the 2005 consultation and field visit. The Tribe indicated to BLM that there were no specific concerns with the proposed project and Tribal issues. Since that visit, the 2006 Deer Creek North Amendment POD was submitted, using the same project boundary as the 2005 Deer Creek North POD. The Amended POD’s additional wells and infrastructure did not impact any of the cultural resources identified in the 2005 inventory. The 2008 revised or combined POD simply took the 2005 and 2006 POD submissions and combined the appropriate sections to assist the BLM’s analysis. Additionally, BLM did consult with the Montana SHPO. BLM contacted the SHPO to discuss the combined PODs, since their 2005 concurrence with BLM’s determination of “No Adverse Effect”. The SHPO requested a letter to document the project area changes since 2005 and BLM’s determination that the “No Adverse Effect” was appropriate.